CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	City of Laurel Riverside Park Yellowstone River Bank Restoration
Proposed Implementation Date:	Fall/Winter 2012
Proponent:	City of Laurel
Location:	N½N½ of Section 22 and the S½S½ of Section 15, Township 2 South, Range 24 East (Yellowstone River – Public Land Trust)
County:	Yellowstone County

I. TYPE AND PURPOSE OF ACTION

The City of Laurel is proposing to reconstruct and stabilize approximately 715 lineal feet of bank along the south side of the Yellowstone River. The riverbank is proposed to be located between its current location and the pre-2011 flood location. The bank was eroded by the flood waters and there is now a 10' high cut bank left of gravel and cobble that is very susceptible to continued erosion. The project will begin on the east side of the existing Highway 212 bridge abutment and extend the riprap and shoreline downstream (east) past the former FWP boat ramp that was lost in the flood. The project proposes to extend the reconstructed bank approximately 35 horizontal feet into the existing channel to fill in a scour area that is immediately east of the Highway 212 bridge. This action would result in fill being placed on approximately 700 square feet of the streambed to reestablish a shoreline between its current and pre-2011 location (see Attachment A). The reconstructed bank will be armored with 42" nominal riprap and the toe of which will extend 45' into the existing river channel. The most extensive bank reconstruction will extend approximately 230 lineal feet downstream from the Highway 212 bridge. After that point, the riverbank restoration will transition to a stabilization and reinforcement of the bank at its existing location. The project will also reconstruct a historic levee on top of the reconstructed bank to match the levee that existed prior to the 2011 flooding.

The reconstruction and stabilization of this bank is necessary to protect the existing buildings and infrastructure located in Riverside Park from further migration of the river channel. In the last 5+ years the main channel of the Yellowstone River has been depositing gravel on the north side of the stream building upon an island/gravel bar and migrating to the south. There is also concern that if the channel continues to move south, it will disrupt water flows into the city of Laurel public water intake, located immediately downstream of the highway bridge, as well as the Billings Bench Water Association irrigation water diversion located on the north shore across from the park. The channel migration was accelerated during the 2011 floods and the restricted channel in this area due to the highway and railroad bridges created extreme scouring of the river bottom that ultimately resulted in the rupture of the ExxonMobil Silvertip pipeline at this location.

The proponent is also proposing to remove 5,500 cubic yards of river sediment, gravel and cobble material from a gravel bar/island that increased in size during the 2011 flood event. The area in question is generally located below the Highway 212 and railroad bridges and then west of the railroad bridge approximately 100'. The purpose is to improve the hydraulic capacity of the river in this area by excavating material so that there is still at least 24" of material above the water line. The material removed will be placed at an off-site location and will not be sold. The gravel bar will be accessed from the north shore.

Project activities would occur during low water flow in late 2012. The project will be completed with equipment located on the shore and will not require that any equipment be placed in the Yellowstone River.

The DNRC Southern Land Office completed an Environmental Assessment on 22 September 2011 for Land Use License #6196, which authorized ExxonMobil Pipeline Company to occupy the Yellowstone River to remove the ruptured Silvertip Pipeline. An Environmental Assessment (EA) for Land Use License #6197that authorized the ConocoPhillips Glacier Pipeline removal was completed on 31 October 2011. Both of these Licenses were for activities that occurred in the same project area.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

The DNRC Southern Land Office (SLO) did not perform any specific scoping or public involvement for this requested action. However, the US Army Corps of Engineers performed public scoping in early 2012 on the Section 404 permit that they ultimately issued.

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

Yellowstone Conservation District: 310 Permit
Yellowstone County: Floodplain Permit
US Army Corps of Engineers: Section 404 Permit
Montana Department of Environmental Quality: 318 Permit and 401 Certification

3. ALTERNATIVES CONSIDERED:

No Action Alternative: Deny the request by the City of Laurel to issue a Land Use License to reconstruct and stabilize the bank along the south side of the Yellowstone River and to remove river sediment and cobble from an island upstream of the Riverside Park location.

Proposed Alternative: Approve the request by the City of Laurel to issue a Land Use License to reconstruct and stabilize approximately 715 lineal feet of bank along the south side of the Yellowstone River adjacent to Riverside Park in a location between the current bank and the historic bank and occupy approximately 700 square feet of stream bed. The LUL would also permit the removal of up to 5,500 cubic yards of river sediment and cobble from an upstream island in the Yellowstone River to improve hydraulic capacity.

Alternative Considered but Dismissed: The City of Laurel originally requested to extend the river bank out to its historic location, approximately 75 horizontal feet into the existing streambed for a substantial length of the Park. This alternative was reviewed by the US Army Corps of Engineers and dismissed because of the impacts that it would have on the Yellowstone River. The alternative that came out of the analysis was a combination that allowed some fill and establishment of a bank between the current location and the historic bank and then stabilizing and re-grading the existing bank.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

The proposed action will result in approximately 700 square feet of the existing Yellowstone River streambed being covered with fill to establish a new intermediate bank that would extend 35 lineal feet into the Yellowstone River. The current bank was significantly eroded during the 2011 floods and consists of a 10' high cut bank of exposed cobble and gravel that is highly susceptible to erosion. The project will create a reconstructed bank that will be armored with riprap to help prevent additional erosion. No significant adverse impacts to geology and soil quality, stability are expected as a result of implementing the proposed alternative.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

The proposed action may cause a short term increase in turbidity as the fill is placed in the channel and the bank is extended into the active main channel. However, it would result in an armored bank that would inhibit further erosion. The current bank is exposed and a high-water event would result in further erosion of the bank if some action is not taken to protect the current cut bank.

The proponent is also proposing to remove material from a state island upstream of Riverside Park to improve the hydraulic capacity of the River. In addition, the re-establishment of the bank may help water flow to the municipal water intake for the City of Laurel that is located immediately downstream of the Highway 212 bridge. During August and September of 2012, the City had to take emergency measures, including the construction of a temporary diversion to ensure adequate flow into the intake. The proposed action is expected to have a positive impact on the future viability of the water intake and not have any significant long term adverse impacts to water quality, quantity or distribution.

6. AIR QUALITY:

What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

Implementation of the proposed action will result in a temporary increase in emissions from heavy equipment that will be used in the project. No significant impacts to air quality are expected by implementing the proposed action.

7. VEGETATION COVER, QUANTITY AND QUALITY:

What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

The riverbank is currently an eroded cut bank consisting mainly of cobble and gravel and the vegetation that was there was removed by the flood waters in 2011. The project would also entail revegetating the upper portion of the reconstructed riverbank above the riprap. No significant impacts to vegetative cover, quantity and quality are expected by implementing the proposed action.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

The placement of fill covering approximately 700 square feet of existing streambed will have a permanent impact on some species in the Yellowstone River along with the armoring that is proposed for the new bank. However, the previous bank was further out in the river and was also partially armored. Additionally, the noise from the heavy equipment used in the project could cause temporary displacement. However, no significant long term adverse impacts to terrestrial, avian and aquatic life and habitats are expected by implementing the proposed action.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

A search of the Montana Natural Heritage Program database indicated that there were eight species of concern known to occur in Township 2 South, Range 24 East and they are listed in the table below.

Scientific Name	Common Name	Status[1]	Habitat Description	Potentially Occurs in Project Area?
Birds				
Ammodramus bairdii	Baird's Sparrow	S3B	Grasslands	No – no suitable grassland habitats are present
Ardea herodias	Great Blue Heron	S3	Riparian forest	Yes – there is suitable habitat present. Great blue herons are found in the area year-round and may breed and winter in the riparian habitats along the Yellowstone River.
Coccyzus americanus	Yellow-billed Cuckoo	S3B	Prairie riparian forest	Yes – there is suitable habitat present. Yellow-billed cuckoos breed in Montana and winter in South America. This species may nest in the riparian habitats along the Yellowstone River.
Gymnorhinus cyanocephalus	Pinyon Jay	S3	Open conifer forest	No – there is no suitable coniferous forest habitat present
Haliaeetus leucocephalus	Bald Eagle	S3	Riparian forest	Yes – there is suitable habitat present. Bald eagles are year-round residents of the area. In spring and summer, they may nest in large cottonwood trees along the Yellowstone River. In fall and winter, they may roost in riparian habitats within and near the project area and forage along the Yellowstone River.
Fish				
Oncorhynchus clarkii bouvieri	Yellowstone Cutthroat Trout	S2	Streams, rivers, lakes	No – there is suitable habitat present, but Yellowstone cutthroat trout are not currently known to occur in the segment of the Yellowstone River near the project area.
Mammals				
Cynomys ludovicianus	Black-tailed Prairie Dog	S3	Grasslands	No – there are no prairie dog colonies in the project area, and there is no suitable grassland habitat present.
Reptiles				
Apalone spinifera	Spiny Softshell	S3	Prairie rivers and streams	Yes – there is suitable habitat present. Spiny softshells occur year-round in the Yellowstone River drainage. In summer, spiny softshells forage in the water, often in vegetated shallows. They overwinter in burrows dug into the bottoms of permanent water bodies.

Source: Table 3-3 (pages 57-58) Arcadis Environmental Assessment of ExxonMobil Pipeline, Yellowstone HDD Project (August 1, 2011)

Implementation of the proposed alternative may cause short term impacts to species of concern for the duration of the project construction. The noise from heavy equipment could disperse or cause wildlife to temporarily avoid the area. The placement of fill in the Yellowstone River and extending the riverbank 35 lineal feet may also cause impacts to trout or spiny softshell. Once the project is complete, there are not expected to be any significant long term adverse impacts.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

Identify and determine effects to historical, archaeological or paleontological resources.

The extent of review for historic and archaeological sites was limited to state-owned land. In the case of this project, some of this land is under the bed of the navigable Yellowstone River and the remainder is an island upstream of Riverside Park. The island/gravel bar contains relatively new material that was deposited during the flooding of 2011. The SLO Area Planner conducted a field review of the island on 13 September 2012 and did not find any cultural resources. Implementing the proposed alternative will allow for the riverbank to be reconstructed and armored to protect existing structures in the park, some of which were constructed by Prisoners of War during World War II. No significant adverse impact to historic or archaeological sites on state-owned land is expected as a result of implementing the proposed alternative.

11. AESTHETICS:

Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

The proposed action would result in heavy equipment placing fill and riprap from the south bank of the Yellowstone River in an area that is visible from the US Highway 310/212 Bridge. If the Proposed Alternative is implemented, there would be a short-term increase in sound due to the equipment utilized in construction. The proposed action would add to the existing noise levels from the highway, railroad, water treatment plant and Cenex Refinery. However, this short term addition is not expected to cause a significant adverse impact.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

Implementing the Proposed Alternative is not expected to result in a significant adverse impact on environmental resources.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

The permits that are required by other local, state and federal agencies or departments for the proposed project are listed above in Section 2 of this EA. The city of Laurel constructed an emergency rock weir to ensure water in their municipal water intake that located in this immediate area. It is anticipated that the weir will be removed around the time this project is begun. No other projects are known at this time.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

Implementation of the Proposed Alternative is not expected to have a significant impact on human health and safety.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

Identify how the project would add to or alter these activities.

Implementation of the Proposed Alternative is not expected to have a significant impact on industrial, commercial and agricultural activities and production.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

Implementation of the Proposed Alternative is not expected to have a significant impact on employment in Yellowstone County. The project will be of a relatively short duration and it is unknown at this time how many local employees will be utilized.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

Due to the nature of the project, implementation of the Proposed Alternative is not expected to have a significant impact on local and state tax base and revenues.

18. DEMAND FOR GOVERNMENT SERVICES:

Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services

Implementation of the Proposed Alternative is not expected to have a significant impact on the demand for governmental services.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

Implementation of the Proposed Alternative is not expected to conflict with any locally adopted plans.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

The city of Laurel currently has the riverbank fenced off due to the steep cut bank and potential for further erosion. The implementation of the proposed alternative would allow the City to reopen Riverside Park for full use to the public. The proposed action is not expected to cause any significant adverse long term impacts to access and quality of recreation and wilderness activities.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

Implementation of the Proposed Alternative is not expected to have significant adverse impacts on density and distribution of population and housing.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

There are no native, unique or traditional lifestyles or communities in the vicinity that would be impacted by implementation of the Proposed Alternative.

23. CULTURAL UNIQUENESS AND DIVERSITY:

How would the action affect any unique quality of the area?

Implementation of the Proposed Alternative is not expected to have a significant adverse impact on cultural uniqueness or diversity.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

The State will benefit by getting annual rent of $150 for the 10-year term of the Land Use License. The Public Lands Trust is the beneficiary of this payment since it involves a navigable river.

EA Checklist Prepared By:	**Name:**	Jeff Bollman, AICP	**Date:**	23 October 2012
	Title:	Area Planner, Southern Land Office		

V. FINDING

25. ALTERNATIVE SELECTED:

After review, the proposed alternative has been selected and it is recommended that a Land Use License be issued for the purpose of reconstructing and stabilizing approximately 715 lineal feet of bank along the south side of the Yellowstone River adjacent to Riverside Park south of Laurel. In addition, the project will place fill on approximately 700 square feet of stream bed of the Yellowstone River to reestablish a shoreline between its current and pre-2011 location. The reconstructed bank will be armored with 42" nominal riprap and the toe of which will extend 45' into the existing river channel. The proponent will also remove approximately 5,500 cubic yards of river sediment, gravel and cobble material from a gravel bar/island located upstream from the Park and located beneath the Highway 212 and railroad bridges. This alternative can be implemented in a manner that is consistent with the long-term sustainable natural resource management of the area.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

The potential for significant adverse impacts has been lessened as much as possible based on the requested scope of work for the proposed project with the recommended mitigation measures. There are no natural features that are expected to be impacted and produce significant adverse impacts if the proposed action is implemented. Potential adverse impacts will be avoided or mitigated by the project through the implementation of the following conditions of the Land Use License:

Mitigation measures:

1. Licensee shall contact the DNRC Southern Land Office at least 48 hours prior to commencement of work on the project at any time during the term of the License. The contact at the SLO is: Jeff Bollman, Area Planner, jbollman@mt.gov or 406-247-4404 (office) or 406-670-4642 (cell).
2. All in-river work shall be completed in an expeditious manner to avoid unnecessary impacts to the river.
3. All activities performed in the river and immediate vicinity shall be conducted in a manner to reduce turbidity along with minimizing disturbances to the riverbed and riverbank.
4. To prevent leaks of petroleum products into the river, no defective equipment shall be operated in the river or adjacent areas.
5. All necessary permits shall be secured before any activities begin.
6. Licensee recognizes that the Licensor's allowance to place fill encroaching on the navigable riverbed does not waive or subordinate any of the Licensors property rights or mineral rights to the stream bed.

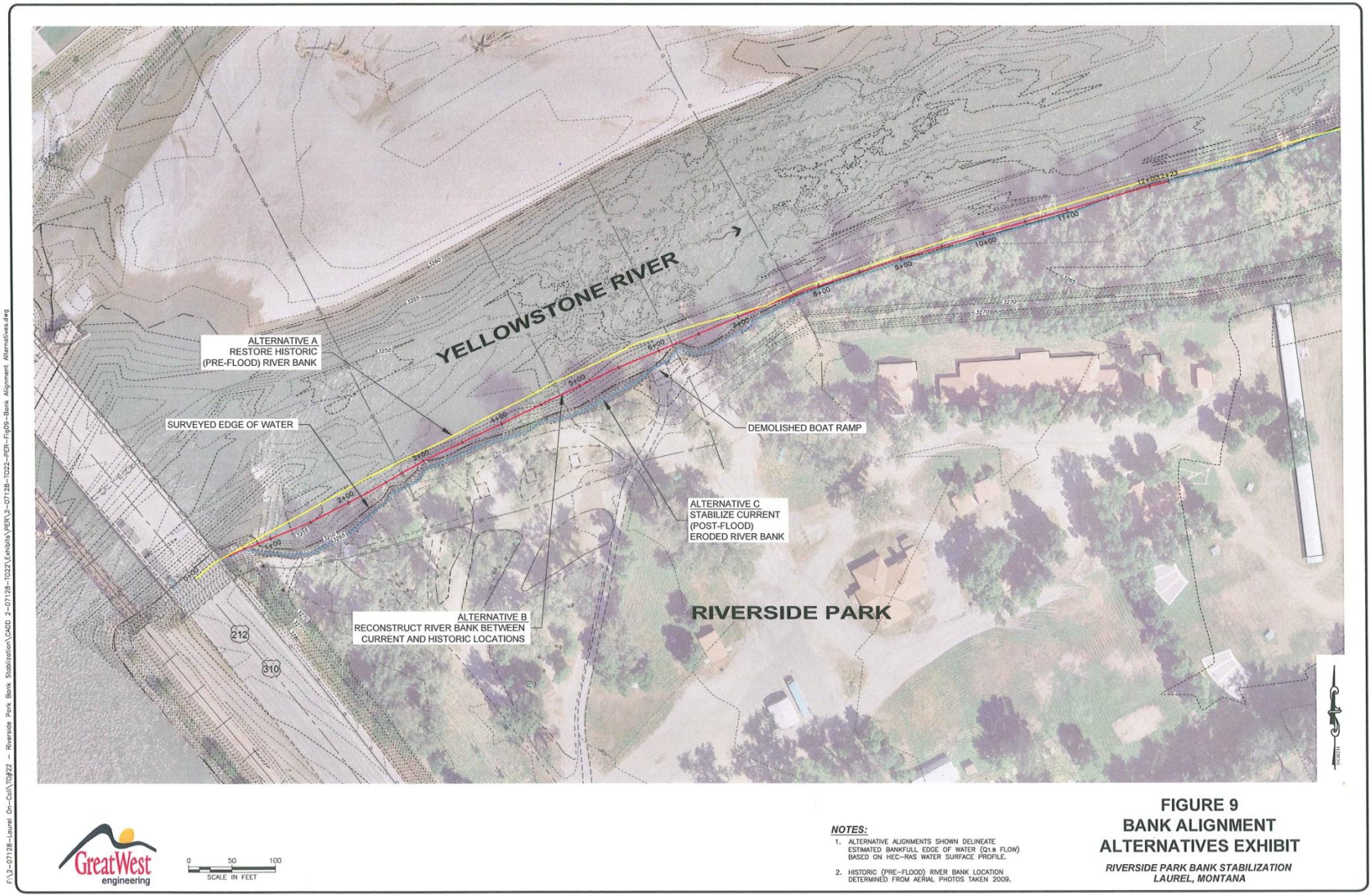
7. Licensee is responsible for any additional permits or requirements from any other affected regulatory agency.
8. The cobble/gravel removed from the island may not be sold or used outside of the river; however it may be used as fill for the reconstructed bank on the south shore.
9. The Licensee shall comply with all public laws, statutes, ordinances, and administrative rules which are applicable to its operations upon the above-described lands. In no event shall the Licensee conduct any activity, or allow any activity to be conducted, upon the above-described lands or within the Project which is: a nuisance; violative of public health, safety, welfare; or is offensive to prevailing community standards concerning morality or obscenity. The Licensee shall be fully and completely liable to, and indemnify, defend, and hold harmless, the Licensor for any and all damages and clean up costs and penalties imposed by any governmental authority with respect to Licensee's use, disposal, transportation, generation, or sale of Hazardous Substances, in or about the above-described lands.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

[ ] EIS [ ] More Detailed EA [X] No Further Analysis

EA Checklist Approved By:	**Name:**	Matt Wolcott
	Title:	Area Manager, Southern Land Office
Signature: /s/ Matt Wolcott		**Date**: October 23, 2012

Attachment A – Bank Alignment Alternatives



Attachment B – Bank Stabilization Plan